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24	1-Lb. Modernistic	16 lbs.	1.35
12	2-Lb. Modernistic	13 lbs.	.90
6	5-Lb. Round	9 lbs.	.70
12	2 1/2-Lb. Square	12 lbs.	1.25
6	5-Lb. Square	10 lbs.	1.05

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## The Business Beekeeper



### Package Beekeeping Versus Overwintering

*Clement Wartman of Oconomowoc Wisconsin, asks how the northern beekeeper finds it profitable to dispose of the bees each fall and start again with packages in the spring. In answer to this three beekeepers, Myron R. Frisque, Green Bay, Wisconsin, Henry W. Hanson, Dakota City, Iowa, and G. H. Cale of American Bee Journal give answers from their experience.*

Henry W. Hanson

Using package bees with me was more or less an accident. In 1936 I lost 90% of my bees and by the time I got through cleaning up the mess and extracting the honey that was left, I thought I had better do something else so I decided I would try package bees altogether. For me it has worked out fine and I don't have to worry about the colonies all winter. I have been free from this worry for about twenty years and I think when you figure it in dollars and cents, you will be ahead.

Let me impress on you that beekeeping with package bees isn't every body's game. It is a different way of keeping bees and I had to learn it

the hard way. The question is, does it pay?

Yes it does provided you are not located so far south that you do not have time to build up the packages to full strength before the honeyflow begins. You should have about eight weeks. The farther north you are, the better it will pay because you have a longer time.

Taking latitude into consideration, let's agree that it takes about 70 lbs. of honey to carry your colonies through the winter. In our location in Iowa we can take a package of bees up to full strength on twenty pounds and have some to spare which leaves us fifty pounds to sell. Let's figure that fifty pounds at 12c; that makes \$6.00. Then let's figure a package at \$4. It will cost you about that by the time you take in your freight, shrinkage, queen replacement, and so on. So at the very start I have a \$2 gain.

We are assuming that a package will produce as much honey as a wintered colony and in my experience it will. Some years on a short flow it won't make it, but the next year on a longer flow it will make more because

you have a young queen to back up every one of your colonies.

Now this \$2 saved is only the beginning. You can run twice as many bees with the same labor because the packages do not need as much attention. You install your packages, see that they are queen-right, equalize them, and it is pretty much an assembly line operation when you go through your bees. You don't need help with quite as much experience. Swarming trouble is negligible.

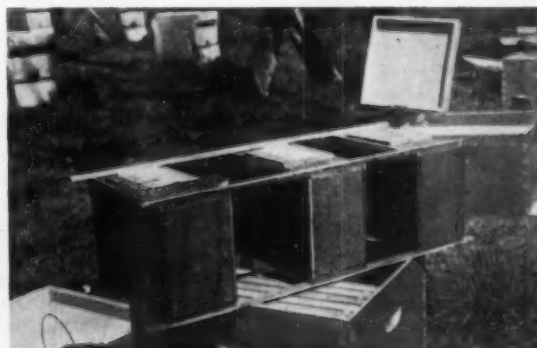
Another thing I like about package bees is that there is no trouble in taking honey off of them. Just give them a spoonful of cyanide and there is your honey crop ready to take in. I don't have to make an extra trip to the yard with escapes or stand around with acid boards or take a sting. In fact I can work without a veil because dead bees don't sting.

In my book the labor used in extracting the extra 50 lbs. that would remain on wintered bees is less than the labor used in removing the crop from the wintered bees by escapes or acid.

Another saving is that you get all your equipment inside to paint and



Colonies excellently protected and wrapped for winter. Will they outproduce new colonies from spring packages?



New packages in April, with ten weeks to grow, may do as well as overwintered colonies but it takes skill and good packages.

repair, sort combs, put on new bottom boards and whatever else is needed. In other words it is easier to keep your equipment in good condition and it will last longer. I have hives that are 20 years old and still good.

Of course when you winter bees you have some loss, but in a favorable year you can make up with divisions. However, I notice a lot of beekeepers who winter bees have to buy packages to make up the loss. In addition they have the expense of buying extra queens and repairing a certain amount of equipment that is damaged during the winter for one reason or another, because of tipping over the hives, someone stealing, someone knocking the colonies over.

It is hard for me to put a value on the savings in a year in wear and tear on my equipment, but I know it is a substantial amount.

In conclusion it is up to the individual beekeeper to decide if his location is suitable for packages and if his outfit is big enough so that labor costs enter the picture. And then I would say, "Go easy!" There are a lot of pitfalls that must be avoided when managing with all package bees.

For a small beekeeper, where labor does not enter the picture, I would say by all means working with wintered bees is more interesting and it is not as much of a cut and dried operation.

#### Myron R. Frisque

Because our winters are quite long in Wisconsin (Green Bay) wintering bees is quite costly here. This past winter many producers lost  $\frac{1}{4}$  to  $\frac{1}{2}$  of their bees even though they left considerable honey. After all we do not need any bees from the 1st of September until the 10th of April. This is a long time to be rearing

brood consuming stores, putting wear and tear on the equipment, and spending money for extra labor with no return. This year for example in spite of the fact that we had a cold and severe spring our packages are building up fine and many queens are laying in two bodies (May 31). They should be ready for the flow about June 20.

For packages to be profitable you should get them from a good reliable dealer. Many packages are not what I would call good ones and this is one reason so many turn up their noses when you mention package bees.

We obtained twenty-five packages from one breeder this season and hived them under the same condition as all the rest but they are quite a bit behind and have to be given considerable help to bring them up with the others. I think it would help the southern package men if they would send out the larger 2 lb. package. There seems to be such a difference in them. Some shippers also get so many old bees in the package that they never build up. If the time ever comes when we can get more dependable packages and if we spend as much time and effort in building them into colonies as we spend with colonies that have wintered I am sure more beekeepers would lean towards packages.

#### G. H. Cale

I think the question is whether package bees will produce as much honey as the over-wintered colony and what the comparative costs are between the two.

A few years ago we had about 1,000 colonies in northern Minnesota along the Canadian line and had at least ten years to find out what the comparison is in that northern location between the two kinds of bees.

beekeeper may destroy his bees by the end of August without losing any worthwhile amount of crop.

During the past 20 years 68.3 per cent of all scale colony gains have been made in July, 20.7 per cent in August and 9.9 per cent in June in Manitoba. Nectar flow peaks and the extent of the nectar flow are diagrammed and discussed.

#### Virginia's Spray Protest

H. L. Maxwell, Berryville, Virginia, sends a copy of the protest that the Virginia beekeepers are making against the unwise use of sprays particularly for clovers and alfalfa for insect control. Since the beekeepers

To put it briefly the packages cost us less when, as Hanson says, the honey left for winter is taken into consideration. The bees consumed enough honey to buy two packages for every colony that was wintered, and so the saving was at once evident in our figures.

In addition although colonies could be wintered, whether packed heavily or lightly, in sheltered spots, in that northern location queens in summer worked long days, laid heavily, and were called upon through the season perhaps to do as much work in one year as is ordinarily done by a queen in two years. So in the over-wintered colonies, while they started off well in the spring, the queens would soon fail. This brought on swarming also during supersedure and in the same period package bees would forge ahead of the wintered colonies and be stronger because they all had young queens and they were all even.

The cost of re-queening the over-wintered colonies, or dividing them with new queens and reuniting, when added to the cost of the winter feed, made the packages a better proposition. Most always the packages made a larger crop than the over-wintered colonies no matter how well they might be managed and certainly when costs were considered the package was much cheaper. Another thing in favor of the package was the fact that the season was short when packages were used in comparison to the much longer season when bees were wintered. This saves all around.

However, as Hanson says, the interval between the receipt of the package and the beginning of the flow should be at least eight weeks and ten is better. There are many locations where such a build-up is not possible. It all boils down to a matter of cost and returns, so each one has to try the thing for himself.

are farmers and prosperous farm conditions generally depend to a large degree on honeybees, a program which will deplete the honeybee populations is dangerous to agriculture. There is a great menace to bees in concentrated beekeeping areas when indiscriminate spraying is done, particularly when the sprays are applied when wild cress, chickweed, and dandelion are in bloom.

The farmer should give the beekeeper notice of spraying and advise his County Agent. The fruit growers are hurt when bees are hurt and fruit is highly important in Virginia, so the protest by the beekeepers is based solidly on agricultural necessity.

#### Manitoba Nectar Flows

The American Bee Journal has received a reprint entitled "Manitoba Nectar Flows 1924-1954, with Particular Reference to 1947-1954" by A. V. Mitchener, of the University of Manitoba. This is a fine and interesting record covering a 30-year period and should be of particular value not only to scientists and producers of Manitoba but to beekeepers generally.

Most Manitoba beekeepers import two-pound packages of honey bees from the southern United States, and Mitchener's records show that they should be received by the middle of April if they are to build up in time for the nectar flow. Also that the



# Honey House Sanitation

by D. R. Robertson

The Extension Service of the Manitoba Department of Agriculture has issued a series of mimeographed articles on various subjects including honey house sanitation, honey houses and their equipment, heating honey and colony management. This summarizes honey house sanitation.

A survey was made during extracting time in 1954 in ninety honey houses belonging to beekeepers who operate 50 or more colonies of bees. The survey showed that all shapes and sizes of buildings were used. This point is of little moment but any building for honey handling purposes should be of sufficient size, sound and clean. Too often it is overlooked that honey is a food product and that it should be handled under sanitary conditions.

Honey and beeswax are very sticky and there are several steps that can be taken in a honey house to avoid an accumulation of messiness from dripping honey or wax.

Water is a necessity and without it, the fight for floor cleanliness is futile. The floor is a big problem in any building. A concrete floor, if reasonably smooth, can readily be cleaned by sweeping with water. The wax, more difficult to remove, will have to be scraped up with a hoe or other tool. Wooden floors are more of a problem unless they are made of hard wood or with a fine smooth finish. Then of course, washing and scraping is just as possible as it would be with concrete.

Rough lumber floors should be covered and possibly the best material is linoleum. Use a cheap linoleum and

replace it every year if necessary. Linoleum will crack and wear and in a honey house it will have to withstand weight it was not made for so the cheaper the material the better. Linoleum has a smooth finish and can be readily cleaned. Some prefer to use paper to cover the floor, replacing it frequently. This is satisfactory, but too often the paper is not replaced. Possibly the best paper is a heavy packing paper which can absorb the honey and last longer than most.

Paint is a solution to many problems regardless of whether it is used on the floor or not. It certainly has an important place for the walls and equipment. Any type of oil paint or washable paint is satisfactory for walls and woodwork. White is a recommended color for the ceiling and upper part of the walls, while a darker color may be used on the lower part.

For the outer surface of honey tanks and other equipment use hard finished metal surface paint. Silver or gray are often used.

Two materials are recommended for the interior of galvanized tanks and extractors to protect honey from reacting with the zinc or iron surface, "galvanized zinc conditioner" which makes a bond with zinc and only one coat is necessary, second "chemical resistant sealer" and lacquer thinner. Three coats of these are required.

Beekeepers without running water, sinks etc. must make other provisions. Water is a necessity so a ready supply should be available with some way of disposing of the waste water.

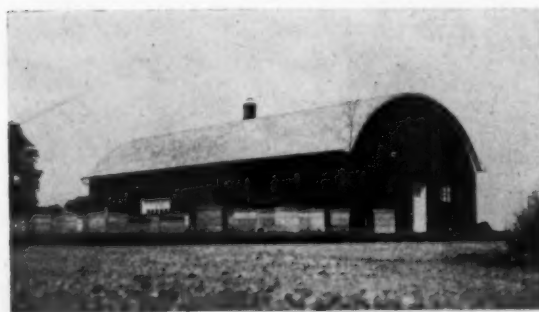
Honey sours readily in water and nothing is more disagreeable than a pail or pool of sour water. Change water frequently. Discarding the water should be done through proper sanitary drainage methods not by just throwing it outside the door.

Buildings not made with a concrete floor and tile drain require a sink or some other apparatus with proper drainage or if drainage is a problem some system must be provided to increase the absorption area for the disposal of the waste water, such as drain tile surrounded with gravel or gravel filled pits lined with boards or masonry laid without mortar.

To avoid honey dripping on the floor use wooden pallets and metal trays to pile empty and full supers of honey on.

During extracting bees and flies are a menace. A bee tight building with proper screening cannot be overemphasized. Bees which come in with the supers or the flies which come in when the doors are open present a problem. The bees will fly to the light and the windows. A bee escape may be placed on the top part of the window and usually works. Drop the window about 6 inches and put a board in this space with a small hole in it. On the outside attach a screen like a cone pointed upward. Bees will crawl up the window onto the board out the hole and through the screen. The exit should be located so that the bees will not become a nuisance.

Lindane vaporizers inside the house will give control for both flies and bees. These come in various forms,



Honeyhouse of Don Barrett, Michigan, with capacity for 1000 colonies. Sanitation in this house is a built-in feature.



Honeyhouse of the Locke Apiaries, Eureka, Illinois, also with a capacity to take care of more than 1000 colonies, is equipped like a home and it's spotless.



either a special unit for the purpose or a bulb with a depression to hold a Lindane pellet. This method is most efficient in buildings kept closed. If doors and windows are open the Lindane has little effect. However, it may be used at night when everything is closed.

Too much emphasis cannot be placed on the kind of clothing worn when handling honey. This is a sticky business and it is almost impossible to keep free from honey on the clothing. Much protection can be given by wearing an apron with a

bib which can be made cheaply or good plastic or rubber aprons may be bought. They are easier to keep clean than cloth. You may protect footwear with a rubber grated mat just outside the door to avoid tracking throughout the premises.

## There Is A Need For A National Honey Queen

by Kenneth F. Hazard

Success in selling is largely a matter of using the right methods. Use one way to show what you are selling and you fail. Show it in a better way and the sale is half made. Make a demonstration that means little to a prospect or make one that catches his interest. Advertising and publicity are selling and without them selling would be difficult. The honey industry must use the right methods to achieve success. Advertising in newspapers, magazines, radio and television is expensive but effective. But a medium to arouse public desire which is relatively inexpensive is the National Honey Queen.

Michigan has used the Honey Queen for publicity for five years successfully. Through each year's queen coverage by newspaper, public appearance, radio and television was accomplished and honey received good publicity. People noticed the queen because she was attractive. They listened to her tell about honey rec-

ipes in foods, she passed out samples of honey to celebrities, to the women on radio and television programs, and thousands listened and watched. Records for the past five years show that honey sales have been greatly increased.

A Honey Queen simplifies advertising and publicity and accomplishes more coverage. What other method would find Don Cornell, Al Martino, Eddie Fisher, The Harmonicats, Kirby Stone Quintette, Nat King Cole, Four Freshmen, Four Aces, Three Suns, Georgie Shaw, Louie Armstrong, The Dominoes, The Governor of the State, and top radio and and television entertainers publicizing honey at no cost? All these and others appeared with Michigan's Honey Queens.

So a National Honey Queen need not be mere cheesecake, but a way to bring favorable attention to the industry, create a desire for honey, and increase buying.

There are several reasons for National Honey Queens. She is symbolic of the industry, she can be an attention getter, she can best make the public honey conscious, and the program has proven successful and economical in actual use.

### Qualifications and Selections

The following qualifications for the selection of the Queen are suggested:

That she be 19-25 years of age, which will comply with most State Fair requirements. That she be single and never married. That a beekeeper sponsor the candidate in each state election, that the state association be sponsor for the national contest. Although it is desirable the candidate would not need to be the relative of a beekeeper. This allows a bigger field of selection. Candidate application should be accompanied by two good pictures submitted to the Queen Committee, one in street clothes and the other in a bathing suit. Three im-



Queen Lois Linske of Michigan (1953) as she appeared on WXYZ with Ed McKinsie, disk jockey.



Queen Barbara Seidelmann (1951) as she appeared on stage before 12,000 people.

partial judges for the industry (1 packer, 1 supplier, 1 beekeeper) plus 2 outsiders, should do the judging. Judges should be selected by committee. The judging should be done at the National Honey Show, (this year in Illinois). The Queen should be judged on poise, personality, attractiveness, talent, appearance and voice.

#### Award to the Winner

The winner should receive a sum of money and a loving cup titled "Miss —, 1956 National Honey Queen." She should be furnished with a formal gown, street dress and other necessary clothing, and she should receive incidental expenses (travel, meals, and lodging for her and escort).

#### Publicity

Her pictures should appear through Associated and United Press, showing her working with the bees, wearing her plastic crown which should be decorated with jewels and with live bees inside. She should be allowed to present honey to top public officials including President Eisenhower. She should appear on such programs as "Welcome Traveler," "Today," "What's My Line," "Godfrey's program," and many other national hookups in both radio and television. She should present honey on various shows and tell about bees and their value. The best time for all publicity is during National Honey Week and the entire month of October.

#### Expenses

Such a program is estimated to cost about \$3,000, including \$500 prize money; \$250 expenses for chaperons; \$500 air and land travel; \$300 for meals; \$250 for hotels; and the balance incidental.

More State Queens and better ones would attend if it were agreed that the State whose queen won the contest would be reimbursed for expenses to and from the National Contest. Contact with one of the National Airlines should be made and an effort made to get them to fly the queen to New York, Chicago, and California for radio and T.V. appearances with airline mention on the program.

Finally effort should be made for an industry tie-in, with expenses shared. For instances, Michigan made a tie-in with the Detroit Area Chevrolet Dealers Association. They furnished a truck for float plus money plus a Chevrolet Convertible and a chauffeur. Over a million persons saw the signs and the association was so pleased with the results they would have paid any bill within reason. So a National tie-in should prove beneficial.

Honey would have to be supplied by the Federation or beekeepers wherever the queen stopped, and if possible bottling the honey should be done at these points to save shipping costs. It might take half to one and half tons of honey in suitable jars with labels stating the honey is do-

nated by "Miss——, 1956 National Honey Queen and the Beekeepers of the United States."

The number of states would have to be determined and some help given each state in their program in the form of instructions on how to choose a queen and how to use her for publicity. Also arrangements should be made for the National Contest, selecting judges, transportation, and a follow through on radio, T.V., and newspaper publicity. There should be a publicity manager for the entire program.

Let's not overlook this simple profitable way of publicizing honey. Will there be a 1957 National Honey Queen. A letter from you to American Beekeepers Federation, Cannon Falls, Minnesota may start things rolling.

#### Shotgun Pollinization

D. Lyon Smith, of LIFE Magazine, sent an advance copy of an article to appear in that magazine (now already out), with this title. To pollinate their Red Delicious apple trees some Washington growers blast pollen at the blossoms with shotguns. Since hand pollination is slow and the fertilizing period lasts only a few days, shotgun pollination takes only a couple of minutes a tree even though it is less thorough. But, the article comments, the honeybee is still the best pollinizer, especially when pollen inserts are used so the bees will carry the right pollen and a good load.



Patricia Norman, Michigan Honey Queen for 1952.



1954 Honey Queen, Maxine Koss, on stage with the "Four Lads", top recording and TV artists.



Here we go into the Alabama woods where bees mean trees.

## Bees and Trees

by A. C. Askew

You may think this is an article about bee-trees—but it isn't. It's a story about trees and bees. It goes back 50 years, perhaps more. Down in Washington County, Alabama, there's an old tumbled-down log house, with the rotting remnants of other small buildings close by. In what was once a garden wild azaleas and honeysuckle compete with "Seven Sister" roses for possession. This was once the home of an old beekeeper in the early 1900's, who is reputed to have kept over 100 bee-gums. If you poke around among the bushes, you will still find two or three of the old hives, with the descendants of those bees of half a century ago, still doing business at the old stand.

We'd better keep clear of the entrance hole, where those black "bugs" as the natives call them are streaming in and out. They're really mean and always ready to attack.

Their ill-temper comes from the fact that every boy that passes down the road, throws a couple of rocks

at the bee-gums, and then takes to his heels.

Now come with me back to the car and let's drive around a bit. I want to show you something that seems to me worth mentioning.

We'll drive through these woods that are about 2 miles square. Fine stand of timber, isn't it? Actually one of the best in Southern Alabama. But on the other side of the road, what have we? Drifting soil, badly eroded in places, a thin poor grass that can hardly maintain itself, let alone feed cattle, and scrub bushes not even fit for burning. Surely as good an example of conservation as one could find anywhere. And it comes about this way:

Always there is going on in some of the counties of Alabama and other Southern States, a fight between the timber men and the farmers who want to run their scrawny cattle through the woods, which are mostly "open range". The farmers like to burn off every year so new

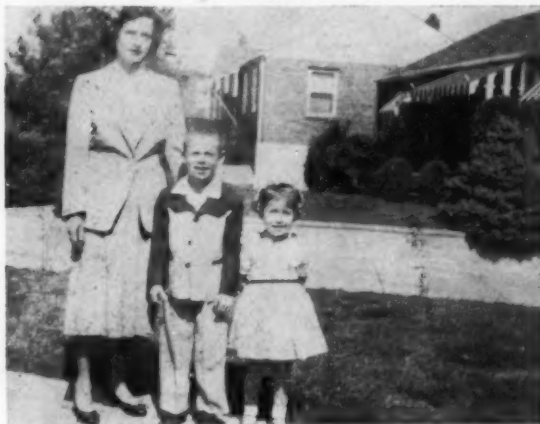


Turpentine for the taking. Woods mean vital statistics in Alabama. For the beekeeper gallberry underbrush.

young grass will spring up, not caring a hoot about the timber. But our old beeman pleaded with his neighbors not to burn around him, because the gallberry bushes in the woods provided his main honey crop. And because he was popular and well liked (as most beemen are) they did not burn the woods that you now see growing such magnificent timber.

But where the woods were burnt, and sometimes still are—desolation. Wise treatment of this land that belonged to men who would not co-operate with the old beemen could still make it productive. Essentially, it is timber country and should be farmed as such by a system of reforestation.

Failing that, the application of proper fertilizers would make that land grow legumes, that would benefit the cattleman and incidentally the beeman too. Crimson clover looks as though it might improve the farm economy of the S. E. states, to an extent the North has not yet realized.



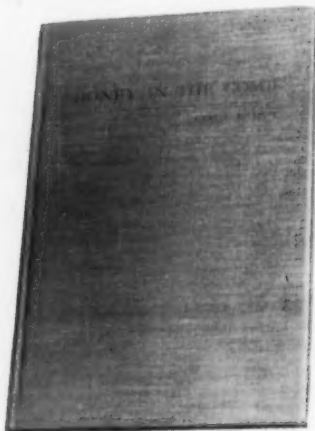
### Our Cover Picture

#### VIRGINIA REINHOLD

##### Eastern Missouri Honey Queen

Virginia G. Reinhold is 36 and the wife of Ray Reinhold, a member of the Eastern Missouri Beekeepers' Association. She has two children (see photo), Kent 7 and Kay 4. She was chosen queen in competition with other members' wives and daughters and she is the Association's first Queen. The contest was held on May 20th, 1955, at the annual field meet at the Arboretum (Shaw's Garden) located at Grays Summit, Missouri. Judges were O. G. Rawson, East St. Louis; Julius Anderson, Missouri State Entomologist; and Wesley Osborn, Hillsboro, Illinois. The Queen was awarded an orchid from the Arboretum's greenhouse. Mrs. Reinhold is not a beekeeper herself (her husband is working on this) but she does own a complete colony of Caucasian bees which she won as the first attendance prize immediately after being chosen Queen. She is a graduate of Cleveland High School in St. Louis where she won scholastic and athletic honors; and she is active in St. Luke's Methodist Church and in school and community affairs. Her hobbies are gardening, tropical fish, and cocker spaniels.

(Information from Louis C. Lueddecke, President, Eastern Missouri Association.)



## THE KILLIONS—*Artists in Comb Honey*

The word "artists" is chosen carefully with full regard to its implications. It goes beyond skill which the Killions have in abundance. It enters the sphere of attitudes; what is setup in the mind as an attribute of one's profession. Here is where their real difference lies. They consider every detail of comb honey production just as important as all the details. Their product shows the love they have given it and they only feel rewarded for each year's efforts when they know that they have slighted nothing; and that every piece of equipment and every job they have done reflects what they see for themselves as an artistic conception of their chosen way of life.

MEET THE FAMILY—Carl E. Killion (top left); Elizabeth (Mrs. Carl, below him); Eugene (Gene), Carl's son (top right); and Kathleen (Gene's wife, bottom right). Lower left, Carl's book, "Honey in the Comb".



# The Killions — Artists In Comb Honey

by G. H. Cale

Comb honey is one of the most beautiful food products in the world. It tells its own story as no one could ever describe it. It is nature's finest sweet in its own original package, a product that the intelligence and ingenuity of man cannot duplicate or equal, retaining all the fragrance and delicacy of the sweet blossoms. Any beekeeper with an aptitude for careful planning and exacting work can profit by producing comb honey but he must keep in mind that the quality of comb honey is built to its own perfection while the super is still on the hive and man can improve it but little when it is removed.\*

Quality section comb honey production is almost a lost art but there are many honey producers so located that comb honey can at least be a part of their production. It calls for a location with a fairly dependable flow of quality honey where comb honey management can be followed year after year. It also calls for a distinct love for the product; a pull at the heartstrings; and an artist's disposition.

Carl Killion, the senior member of this family, was not "born to the velvet" in beekeeping. He came into the world in a two room log cabin near the small mining town of Diamond in Indiana, the son of folks of Dutch-Irish mixture, none of them interested in bees. His father was an expert in mining and his mother a true artist in crocheting, embroidery and similar skills.

When he was seven the family moved to Bridgeton and there Carl became interested in bees from watching an old beekeeper nearby. Many a day he would crawl on his stomach to within a few feet of where the old man was working and lay there in the tall grass to watch. Soon he earned the right to climb barefoot up the old fellow's peach trees to get swarms. In 1916 his brother found a bee tree which was cut down and the bees removed for Carl's first hive of bees.

Two years before he had begun

work in the mines with his father but his interest was not there in the black tunnels. It was in the bees. Yet he stuck to the mines for twenty-one years until 1935.

Across from his home was a well kept farm owned by George Payne where one day in 1919 his granddaughter, Elizabeth Hayes, came to visit. She was "love at first sight" for Carl and they were married in 1920, on Sept. 4th, coincidentally the same day on which Dr. C. C. Miller, also famous as a comb honey producer and writer, passed away.

On one of the tours of the Vigo County Beekeepers' Association in Indiana in 1922 he met Charles Kruse of Paris, Illinois. Kruse too was a beekeeping enthusiast and a comb honey artist and they became the best of friends. Kruse insisted that the Killions move to Paris and he made Carl his partner, a business arrangement that lasted until the spring of 1936. Kruse passed away in 1939 and Carl purchased all the bees and equipment from Mrs. Kruse.

While his son, Carl Jr. did not take to the bees, the youngest boy, Eugene, did and began his beekeeping with

his father. Four days after he returned from India at the end of World War II he told his father he wanted to stay with the bees and seemingly to attest his faith he married his father's office secretary, Kathleen Humphrey. Carl had been the Chief Apiary Inspector for Illinois since 1938 so a secretary was an essential person and to keep an efficient secretary in the family is a step in the right direction.

Comb honey production does not have to be a wide-flung, big scale business. In fact it is better kept small. During the five years with Kruse no more than 240 colonies were in operation and, as partners, Carl and Gene have never quite reached 500 in any one year. It is better to get maximum production from a small number of colonies than to have too many and not take care of them properly. At present all of their production is comb honey and about ninety percent of it section comb honey and the rest a limited amount of honey in shallow frames for bulk comb honey. The family divide the work, Carl and Gene doing all the field work and Elizabeth and Kath-



One of Killion's apiaries about 1949.

\*From "Honey in the Comb" by Killion. The production schedule for comb honey in this article is also summarized from his book.



leen doing the major part of the section cleaning and all four of them doing the packaging.

This spring Carl made me an estimate of the total amount of section comb honey he has helped produce and it was approximately 23 cars or a fair sized train load. So they must all love their work. Probably Gene and Kathleen could have an occupation that would make them more money but beekeeping is giving them greater rewards.

The production of comb honey calls for a location with a fairly dependable flow of quality honey. A heavily wooded area too often results in an excessive amount of propolis that stains the wood and the surface of the comb. Yet there should be some wind-break with good air drainage. Contrary to frequent opinion the period of flow should be accompanied by hot nights so the wax workers may build comb more easily in all parts of the supers as this results in more tender comb. So the location problem is not easy and it often takes considerable survey work and perhaps going to a new place to get just the right conditions. Yards in partial shade, with some wind protection and a natural water supply, are very desirable. The Killion locations are in farming country where sweet clover is used in the farm rotation so the farmers must be depended on to maintain this relationship.

#### Comb Honey Equipment

The equipment the Killions use has become adapted to the job over a long period of trial and error and ideas are incorporated from Dr. Miller and from Kruse. The hive is a ten-frame Langstroth with only nine frames and

a follower board at either side. The followers allow easier comb removal and there is no need to place any comb outside the hive. If both boards are removed a division board feeder may be used at one side when needed. With the followers, brood will often be found also in all combs and so the supers will be directly above brood and the bees work the sections much better.

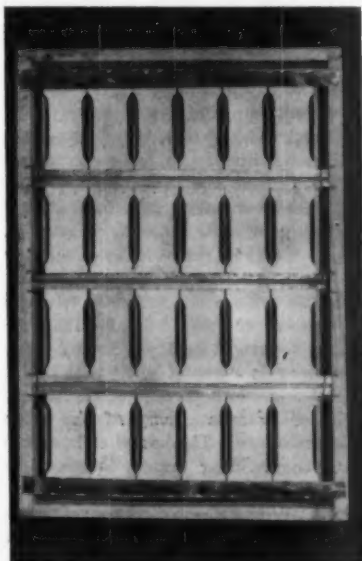
The bottomboard is a deep one, like Dr. Miller's, which promotes comfort, reduces swarming to some extent and allows the use of a slatted or false bottom insert during the flow to reduce burr comb building. The entrance closer is a wooden block with a center entrance for winter and short nail rests in the other edge for

spring. The block may be entirely removed in summer. The cover is like the Miller cover, the same width as the hive from side to side but with front and back edges that extend down over the hive top. The frames are spaced with nails extending only a quarter of an inch to reduce propolis and insure accurate spacing.

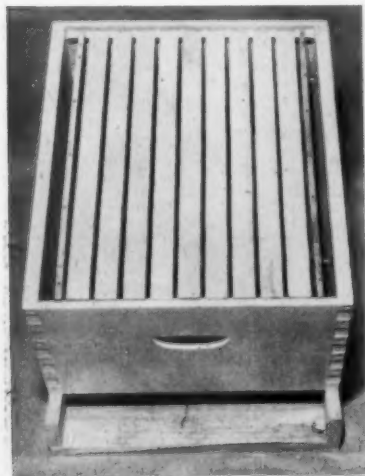
The ventilated super is the most important part of the equipment. The sections rest on tin supports which are bent to form an inverted T and rest on staples. It was developed from the Miller super. Kruse first made the sides of thinner lumber so the follower could be used on both sides. Then more ventilation was given at the ends with a false wall which allowed space between itself and the hive ends. Thus a bee space was provided completely around the sections for the passage of bees and for air and comfort. The sections used are  $4\frac{1}{4}$  square, two beeway and not split. The separators are about  $3\frac{1}{2}$  inches wide and they rest on the T tins. At the top the sections are kept squared up with thin wooden strips inserted crosswise between the rows of sections.

Only the finest sections are used and they are stored before folding on a damp concrete floor; then carefully folded in a section press. The foundation is in  $15\frac{3}{8}$  inch lengths, just right for cutting in the cutting box into four equal lengths of about  $3\frac{3}{4}$  inches. Only selected wax is used, extra thin and delicate.

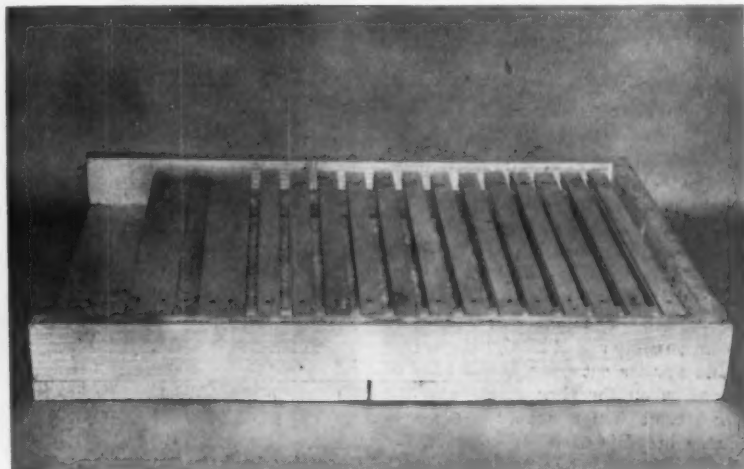
A regular foundation cutting box and a special kerfed-edge cutting knife are used to cut the foundation into top and bottom starters to be waxed into the sections on a multiple foundation fastening board, using an



Ventilated T super



Brood chamber reduced to nine frames. (Note follower boards.)



The Miller bottomboard with slatted rack.

aluminum hot knife, heated over a small oil stove. The sections with foundation are then placed in the supers and the bottoms and tops are painted with hot paraffin. One super with a center bait section is provided for each colony at the start of the flow.

#### Colony Management

All colonies are wintered in double brood chambers with about seventy to ninety pounds of stores and a good supply of pollen and packed or wrapped. Between flows colony requirements then can be summarized this way: plenty of stores, a good cluster of bees, winter packing and a windbreak. Thus provided, spring work is routine: unpacking, checking, giving extra bodies of brood if needed, some feeding maybe and the use of pollen supplements if the colonies demand it.

Selection of stock for comb honey production is almost a necessity because comb honey calls for a bee that will enter the sections readily, draw the foundation quickly, and deliver a well finished product with even, white cappings. Only bees that will do this year after year are desirable.

The selection and rearing of queens most suited for this job is a part of the year's work. In addition the management plan for swarm control calls for the use of dequeening and requeening so the needs of selection and swarm control are served at once. The queen rearing yard should be satisfactorily isolated so there are no bees in a radius of two or three miles except colonies of the same stock.

Perhaps the problem of swarming has done more to prevent beekeepers from producing comb honey than all other reasons put together because swarming, if not controlled, ruins the changes of getting a good crop. In Killion's plan, all queens are clipped so the escape of swarms is held back. three important objectives also merge into one effort: to control the swarming, to requeen the colonies and to get a crop.

The new queens are reared under the most ideal conditions—under the swarming impulse in queenright colonies but from larvae grafted from the finest breeding stock.

The colonies, run during winter in double brood chambers and with more room possibly added during the spring build up, are cut down to one body of brood when the flow starts and the first comb honey supers are given. Extra brood is used for increase, for the bulk comb honey producers, or to help build up the weaker colonies.



Giving cells to cell building colony. (Queen right; swarm bent.)

This forcing brings on swarm cells quickly. About four days after the cut down any queen cells found are removed and about three days later the same colonies will be building cells again with intense eagerness. Cells are then removed in a selected colony, the follower boards taken out, and the frames spread to leave space in the center for a bar of cells. This is a queenright colony wanting cells. Grafting is done at once with royal jelly and with the grafted larvae selected from a colony of the most desirable stock. The bar of cells, fitted into the holding frame, is given to the prepared hive.

As an example of the plan, suppose several cell bars were grafted in

a yard on June 1. On June 3rd all cells in the yard are killed and all queens except those in the cell builders. About June 7th the cells are again destroyed except those in the cell builders. On June 10th, one ripe cell is given to each queenless colony, again making sure that there are still no cells of their own present. This means shaking the bees off the combs in front and being extra careful. By this time they will not swarm with the grafted cells. (Lately some young queens from nucs have been given instead of the mature cells.)

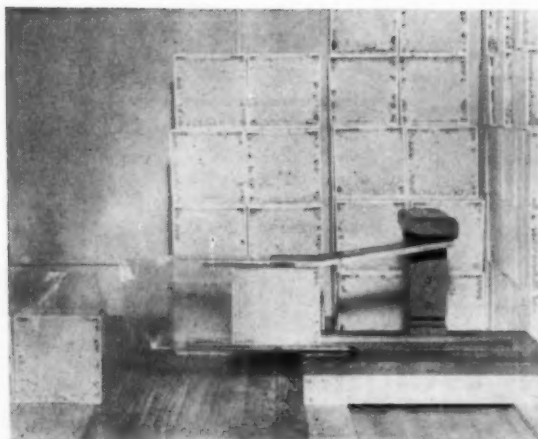
When the new queens mate, any honey in the brood nests is moved rapidly into the supers to make room for laying. From this point on the finest comb honey is obtained and it is impossible to crowd the colonies enough to make them swarm. The addition of supers is the main need.

The first comb honey super should be half or two thirds full before another is given on top of the first one. On the next visit this top super is put next to the brood nest and under the original super. Again a new super is placed on top. By now the first super should be nearly full and the second one at least half full. Don't give comb honey supers too rapidly or too many at a time and always keep the super nearest to being finished just under the newly added super. When this super is completely finished it should be removed to eliminate travel stain and avoid any more handling.

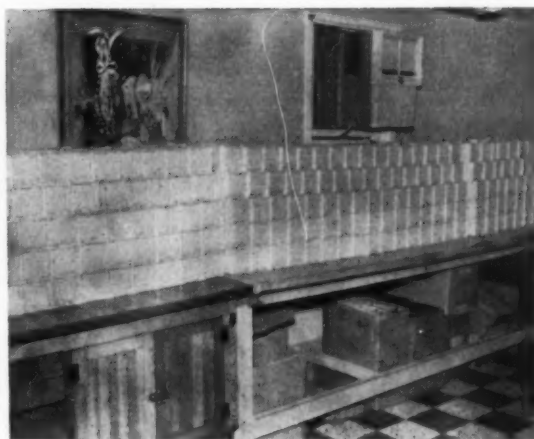
When handling the supers if the bees seem to be avoiding the back ends the supers may be reversed, turning this end to the front. Don't



The one ton combination grain and stock bed truck. The upper part is left on while hauling bees and has removable ventilating slats.



The bag machine used in packaging comb honey.



Two tables full of fancy comb honey. (Table at right not yet completely finished.)

judge the completion of the super by looking just at the top. View it from the bottom. If it is ready to come off dislodge most of the bees by shaking and smoking and place the super above the escape board with a ventilator rim on the super and under the cover, if the weather is real hot, to avoid any meltdown.

When the supers are brought into the shop they are fumigated with carbon disulfide to control any moth larvae that may be present. This may have to be done more than once if there is any danger of moth eggs hatching later. If the season has been such that the honey carries too much moisture it may be necessary to use a dehumidifier to reduce the moisture content to a satisfactory point and so prevent fermentation.

#### Preparation for Market

This is a very important part of

the comb honey program because the market demands a quality product to keep pace with today's highly specialized food items. Grading is the first step. If sections appear fairly uniform, entire supers of 24 sections are weighed at one time and the net weight stamped on the sides of the sections because of the paraffin on the tops and bottoms.

All the sections are cleaned of propolis and wax and made as neat as possible before they are packed. Each finished section is placed in a polyethylene bag and the bag is heat sealed. It is then put into a window front carton. This plan entirely eliminates any leaky sections on the merchants' shelves.

Section comb honey is a seasonal article and it should be delivered to the market in warm weather as it does not ship well in cold weather.

Remember too when the comb honey enters the modern market it has to compete with hundreds of food items where fluorescent lights make modern food packages sparkle like so many diamonds. Our honey will be in the race for the customer's attention among all the other products which are also dressed in their best.

#### Bulk Comb Honey

About ten percent of the Killion's honey is bulk comb honey in glass but the same general plan of management is followed, using single brood chamber hives.

By producing some bulk honey each season the lower grades of sections can also be used in the glass. When the honey is cut for the jars it is important to drain all the liquid honey from the comb edges as this loose honey will soon crystallize and the pack will become unsalable. Be sure each jar is as full of the cut comb as possible. A full pack means more sales than a partial pack. If the liquid honey is heated to 160 degrees and then cooled to about 130, the yeasts will be destroyed to prevent fermentation and granulation is retarded. The wax of the comb won't melt at this temperature. Finally cap the jars, cool them, and place them in the shipping cases.

The future may bring changes in the classic product of the hive and comb honey may then be presented to the public differently than at present. But it is an historically honored product; honey in the comb, the first sweet known to man.

"My son, eat thou honey because it is good; and the honeycomb which is sweet to thy taste; so shall the knowledge of wisdom be unto thy soul."



Three jars of fancy chunk honey.



## The Sideliner



# An Improved Device For Weighing Colonies

F. R. Shaw,

Department of Entomology, University of Massachusetts, Amherst, Mass.

In order to carry on research on various aspects of beekeeping, the author has been faced with a problem of obtaining colony weights. Other investigators have utilized platform scales, a tripod with a scale and other improvisations. None of these is too satisfactory. Platform scales are heavy, awkward and require considerable adjustment for accurate determinations. Other devices currently in use for weighing colonies of bees require considerable care in their use or the colonies may become unbalanced during the manipulations. This can lead to difficulties.

A practical use of an improved weighing device would be a rapid way of determining relative colony needs for feeding either in the spring or in the fall. For all these reasons the

author devoted a considerable amount of time to developing an improved weighing device.

In order to avoid possible loss of control of the colony during the weighing operation, it was decided to have the colony supported at three points, the back, and both sides of the hive. After considerable experimentation iron hooks were constructed which fit under the side rails and back rail of the bottom board. A lip on the inner edge of the hook effectively prevents its slipping during the weighing process. The hooks are fastened by means of chain to S hooks which are attached to a T shaped hive supporting device made by welding two pieces of angle iron at right angles. The advantage of the use of the chains is that this provides

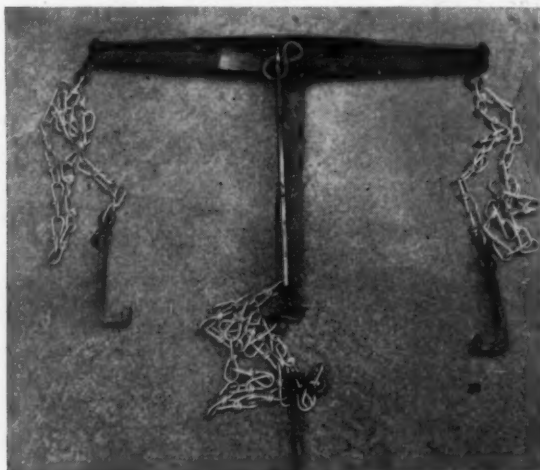
a means of rapidly adjusting the weighing device to one, two or three story colonies.

To the T shaped device is attached a heavy duty spring scale. This can be suspended from a wooden handle.

We have used the improved device to weigh many colonies and have had no mishaps. The side hooks must be placed beyond the center of the side rails of the bottom board. It is possible to determine weights of a number of colonies in a relatively short time.

The accompanying photographs show (1) a close up of the details of the T shaped hive support and the hooks which fit under the bottom board and (2) the actual weighing of a colony of bees.

Below, a closeup of the details of the T shaped hive support and the hooks that fit under the bottomboard. At right, apparatus in place; actual weighing of the colonies.



# How To Make A Wire Embedder From Brood Frames

by Charles W. Gouget

Although most homemade wire imbedding devices are slow in manipulation and time consuming in operation, this one which operates on the principle of a suit-pressing machine is relatively fast and efficient. The steps in the construction of this wire imbedding device may be listed as follows:

1. Lay a board with dimensions of 1" x 12" x 27" in a horizontal position and nail a block of wood 1" x 2" x 4" in the upper right hand corner.

2. Nail a second block of the same size exactly eighteen and one fourth inches from the first, parallel to it and flush with the upper edge.

3. Remove the small projecting ends from two brood frame end bars and drill a hole for a small, round, curtain rod in the center of the larger section three and one fourth inches from its end. Then nail these bars in an upright position (large end down) to the center of the blocks already attached. See diagram.

The two elevations used with the imbedding frame are made from one half inch lumber or wallboard. See diagram.

4. The first elevation covers the entire area between the upright posts from the top edge to the bottom edge of the baseboard.

5. The second elevation, which is only seven and one half inches wide is nailed to the first elevation three

fourths of an inch from the front edge and one half inch from the side edges. See diagram.

## Constructing the Imbedding Frame

6. Shorten a regular brood frame so that it will be 17" long and 9" wide, outside dimensions. This reduced frame should fit exactly inside of a regular brood frame with the bottom bar removed because the larger frame will serve as its hanger. See diagram.

7. Three supports are used across the "reduced" imbedding frame, one in the center, and two others eight inches each side of the center support. The metal (sheet iron) electrodes, one and one half by three and one half inches are screwed on to these supports. The electrodes should be beveled along the lower edges to prevent sticking to the wax by reducing the contact surface.

8. Bore a one eighth inch hole three fourths of an inch from the small end of each hanger end bar, and a similar hole four inches from the small ends of each end bar of the imbedding frame that fits into the hanger. Assemble the hanger and the imbedding frame by inserting a small bolt through the holes made.

## Electrical Wiring

9. The two outside metal plates in the imbedding frame form the contacts that complete the circuit

through the frame wires.

10. One end of the electric circuit should be fastened to one end plate and the remaining end of the circuit fastened to the plate on the opposite end.

Make sure that the circuit is completed "in series" through the heater coil, and assemble all the remaining parts as shown in the diagram.

## Operating the Imbedder

1. Use the top elevation for imbedding shallow frames and the first elevation for imbedding brood frames.

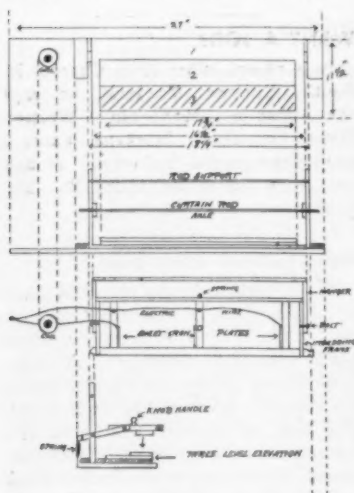
2. Place a prepared frame with two wires and foundation on the proper level with the foundation down and the foundation wires exposed on top.

3. Bring down the imbedding frame "suit-presser" fashion, pressing firmly at all times to prevent sparks from burning off the wires; at the same time watching the heating of the wires and the heating coil.

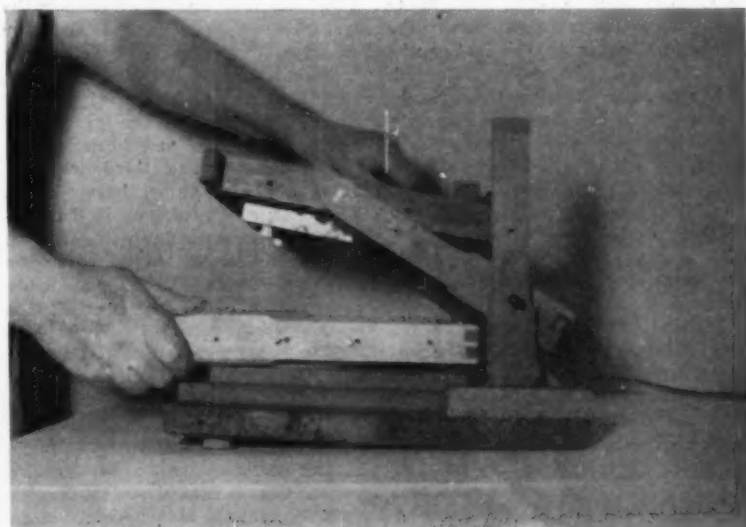
4. When the heating coil begins to redden with heat release the pressure and the tension spring will break the contact. Experience will find the point where the wires are imbedded properly.

**CAUTION:** Care must be taken not to maintain contact too long for fear of melting holes in the foundation. Experience is the best teacher.

Illinois



A working diagram showing the construction of the wire embedder made from brood frames.



The prepared frame is placed on the selected level and the embedder brought down, "suit-press" fashion, and held firmly against the frame wires. The coil and the frame wires should be watched closely during the operation.





Fullerton's specialized Christmas pack. Contains Cinnamon and Honey, Peanut Butter and Honey, and straight honey container wrapped in fancy trimmings, on a mail order basis.

## Management in A Ranching Country

by Doyle Fullerton

This is our years' schedule of beekeeping in Poverty Valley in the Sandhills of Nebraska and South Dakota. We start off in the spring by feeding pollen substitutes, dry sugar or left over honey as is necessary during March and April. In the fore part of May we replace the winter loss with package bees and booster packages are added to weak colonies.

The main theme of the spring work is to have these colonies built up to their maximum strength when the honeyflow begins in the last weeks of June. Those who are familiar with this area know it is mostly a ranching country. The rancher plans to start haying operation immediately after the 4th of July. With all the up-to-date equipment of today this hay job is nearly always over in two or three weeks—so is the honeyflow. This means three or four weeks is the length of the flow off the meadow land.

Then we move our colonies about August 1 into the alfalfa fields farther up in South Dakota. This is generally done on a contract basis for pollination. We find this to be very hard work as the weather is generally hot, colonies very strong and we have to be careful of uncapped honey and other numerous details. We strive to give the farmer the best service and furnish him with good hard working colonies.

In September we shut the colonies down to double hive bodies in which they winter. Then they are moved back to the winter yards after the killing frost. We do not wrap the hives for winter; just aim to give them wind protection, such as trees or Soapweek hills.

We had an outstanding crop in 1954 as it was really a freak season. I believe we got the best yield of any year that I can remember. First, the flow started off good in the last week of June. This lasted 10 or 12 days, then came hot, dry winds that shut the flow like closing a door. The ranchers really stepped up haying as they feared the grass was going to dry up and burn. Really looked rough. The third week of July the rains came, heavy rains. The aftergrowth came up in the meadows and some surplus was gathered. The same situation happened in the alfalfa fields. Here the second cutting never came up or so sparsely it wasn't worth cutting. This left the alfalfa fields with a long season and with these late rains an ideal situation for seed production developed. This also furnished an abundance of bloom where normally there wouldn't be any at this time. So, we actually had a double honeyflow in the '54 season compared to a normal season for this area which is rated as submarginal by the experts on honey production.

We try to specialize in cut comb honey for which we have the best demand. This is comb cut from shallow frames and sold in glass jars as chunk honey; also sold in plastic containers. We handle only a small amount of strained or extracted honey in jars and tins.

A new addition to our line in 1954 was specialized mixtures for Christmas packs, Cinnamon and Honey and Peanut Butter and Honey, both very delicious. These and the straight honey container wrapped in fancy Christmas trimmings were offered on a mail order basis. We did the wrapping and mailing on the date specified to any address in the continental United States. For each pack we furnished a Christmas card so the receiver would know the person sending the gift. These made excellent family gifts, one that every one would enjoy. We were quite successful in this venture.

Nebraska

## Sorry, Cindy

That little girl in the last issue, page 277, licking her father's good honey off her finger is Cindy Meineke, daughter of Ellsworth Meineke, Palatine, Illinois, of Meineke's Honey Farm, well known for his honey candies. Cindy is now nineteen and still likes comb honey or a slice of capings. Crystallized Honey Spread has been added to her favorites and when at the University of Wisconsin she keeps a jar in her room for snacks. She has been a good salesgirl too and has sold many tons of honey since that picture was taken.

## WANT A JOB?

In a recent letter from Charles M. Smith, Billings, Montana, he says that Damon McKibben, Western Honey Co., Terry, Montana, wants a good year-around beekeeper. If any reader is interested write Mr. McKibben.

## New Institute Cook Book

The American Honey Institute plans to have a brand new Honey Cookbook ready for you this summer. This recipe book is a collection of the Favorite Honey Recipes of Famous Home Economists. Each recipe is a jewel. The book as planned will be in two colors and contain more than 30 pictures. With this *Star Recipe Book* and *The Story Of Honey* you'll create a market for Honey.

American Honey Institute, Madison, Wisconsin



George and his model T. Good old days! Bahl

## A Cow and a Model T Ford

by George Rea

Heavy fog made going slow that morning on the mountain road from Tyrone to Houtzdale, Pennsylvania. Bees were to be inspected on that mid-September day, and I had taken an early start from the hotel in Tyrone. The road was dirt but in good condition. My little model T Ford was chugging along slowly, for a watchful eye had to be kept in poor visibility for farmers with their teams and wagons or perhaps domestic or wild animals.

In an especially thick spot of fog the car was creeping along slowly when a sudden jolt followed by a furious kicking and bellowing revealed to my startled gaze the posterior end of a cow on top of the motor. Almost as soon as the car stopped the cow bounced free and ran off out of sight in the brush by the roadside. She must have been standing contentedly chewing her cud in the middle of the road, rear downhill and totally obscured from my vision by the fog. My first thought was for the well-being of the "critter," but she evidently was not badly injured and had completely disappeared.

But the car was a mess. The sudden fright had caused the cow to deposit considerable fecal matter all over the top of the car. The flimsy hood of the ancient model was badly

bent. The radiator was twisted to one side and the hose connection broken so that the water all flowed out almost at once. Some of the radiator tubes also were broken. Fortunately the accident occurred only about one mile below Houtzdale. Fortunately, also, those little early cars were not so complicated and not so hard to repair as the cars of today. I was able to pull the radiator back almost into its original position so the fan could run. The dented hood needed only to be cleaned of some of its filth. The motor started off promptly by hand cranking, for there were no self starters in that day. Houtzdale was reached by the time the motor grew so hot it suddenly stopped almost in front of a repair shop. The mechanic had the car all fixed up and ready to go by the time I returned to town that evening, after I had hired a horse and buggy from the local livery stable and inspected the bees in several small apiaries that day.

That night I enjoyed the cordial hospitality of my dentist-beekeeping friend and his wife, Dr. and Mrs. Thomas H. Litz who gave me an old-fashioned straw skep made by a local beekeeper which I later presented to the beekeeping office at State College, Pennsylvania, Professor E. J. Anderson in charge.

### For Wax, "Grease" the Cans With Honey

In rendering beeswax, if you will "grease" open five gallon cans with any kind of thick honey and put in about two inches of boiling water after the can has been filled three fourths full of wax, then finish with the hot wax, the cake of wax after cooling comes out easy.

Paul Wege, Oklahoma

### Control Weeds With Salt

I find the last week in May a good time to cut grass and weeds growing around the hives that may hinder the bees when entering. To kill the grass I spread two or three handfuls of salt on the ground in front of the hive. This will be adequate for the entire season and sometimes the next one too.

Marvin Kosanke (From Wisconsin Horticulture, May)

### Many Pardons, Mr. Schmid

In the last number in the article on page 289 about Austria, by the editor of "Bienenvater", the name of the magazine is given as "Bierwater". Just what is bierwater? Ask the typesetter, and those of us who read the page proof (none will know). Maybe it is some kind of medicinal water in a European spa. Anyway, our humble apologies, Mr. Schmid.

### Drinking Ledge

In spring, when the bees need lots of water for the hive, I use a shallow pan a fourth inch deep with a ledge or rim wide enough so that the bees can stand on it and dip their heads into the water without drowning. If the pan is of iron or steel and rusts, the bees get the water with iron in it, and I believe they are more content and vigorous.

Lt. Col. Michel Jacobs  
New Jersey

### Wings For Your Honey

The American Honey Institute gives your honey wings at little expense to you by making friends with the food editors and furnishing them with recipes; advising on the uses of honey; keeping in touch with the food industry; issuing recipe leaflets and cook books, posters, streamers and display material. These services are the winged feet the Institute has for you. Put them on and fly along. Write American Honey Institute, Madison, Wisconsin.

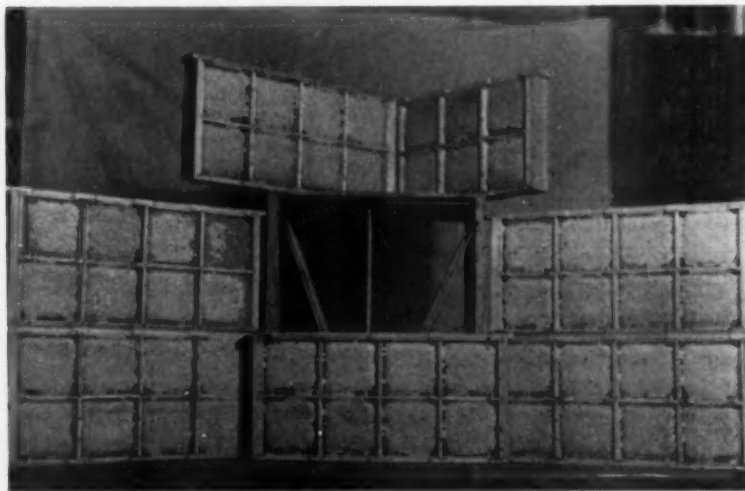


#### HONEY CHOCOLATE CAKE

2 cups sifted cake flour	$\frac{3}{4}$ cup water
$1\frac{1}{2}$ teaspoons soda	1 teaspoon vanilla
1 teaspoon salt	2 eggs, unbeaten
$\frac{1}{2}$ cup shortening	$2\frac{1}{2}$ squares unsweetened chocolate, melted
$1\frac{1}{4}$ cups honey	

Mix shortening just to soften. Sift in dry ingredients. Add  $\frac{1}{2}$  cup of the liquid and the eggs. Mix until all flour is dampened; then beat one minute. Add remaining liquid and melted chocolate, blend, and beat two minutes longer. Batter will be thin. (Count only actual beating time. Or count beating strokes. Allow about 150 full strokes per minute. Scrape bowl and spoon or beater often.) BAKING—Turn batter into pans. Bake in moderate oven (350° F.) about 30 minutes for layers or about 40 minutes for square cake. NOTE—Mix cake by hand or at low speed of electric mixer.

American Honey Institute, Madison, Wisconsin



#### Section Honey in Deep Holders

George Vest, of the Lewis-Dadant Branch, Lynchburg, Virginia, got this picture from the Absalom-McGraw Motor Co., Montgomery, W. Va. Out of fifty-six sections produced in deep section holders, each containing eight sections, only three were culls. W. C. Absalom, 621 Second Ave. in Montgomery, is the beekeeper of the group and he is very proud of this production.

#### Recommendations For Better Beekeeping

1. Keep your bees in movable frame hives and keep the frames movable. House clean at least once a year, preferably in early spring.
2. Use full sheets of wired foundation and wire the frames. Be sure to embed the wires well.
3. Use two hive-bodies for brood chambers during the build-up period. Reduce to one hive-body by using queen excluder once the honeyflow starts.
4. Reverse hive bodies (brood chambers) or adjust combs during build up so that open or soon-to-be open combs are on top.
5. Have brood combs drawn during a good honeyflow.
6. Use uniform equipment. The Langstroth hive is considered standard.
7. Have three to five shallow supers for the storage of surplus honey.
8. Add first supers at beginning of honeyflow, or when the tops of the brood chamber combs show white wax.
9. Clip queen's wings, the left on the odd year, the right on the even year. It will help you tell her age and will not let her fly away in case of swarming.
10. Requeen whenever old queens become maimed or when queen shows signs of failing—certainly by the time she is two years old.
11. Unite small swarms onto weaker colonies.
12. Leave a brood chamber full, or at least a super full of honey on each hive for winter stores. Don't rob too closely in spring, either.
13. Feed a 2:1 sugar syrup as a substitute when honey is in short supply.
14. From mid-winter to early spring feed a pollen substitute when pollen is needed, but is not in the combs, or when the weather or season is unfavorable for the bees to collect pollen from early sources.

(A release from  
N.C. State College)

#### The Birds And The Bees

One movie house advertises the new movie "The Birds and the Bees" by offering two admissions for one ticket and one bee, with the precaution that the bee must be delivered in a "box". Quite a new wrinkle in advertising.



# The Beginner And His Bees

## Enemies of Bees

by W. W. Clarke, Jr.

Extension Apiarist  
Pennsylvania State University

There are several enemies of bees such as mice, skunks, bears, and birds which cause much trouble to both the beekeeper and his bees.

Mice do a great deal of damage to combs and frames, especially in stored comb and wintered bees. They usually do most of their damage to the bees which have formed their cluster. During the summer, while bees are active, there is little or no trouble from mice. Most of the damage can be prevented by the use of entrance blocks which close the entrance down to 5/16 of an inch. Some beekeepers will use 3/10-inch mesh hardware screen over the entrance especially if equipment is not standard size. This hardware screen may be nailed to the hive as a permanent part of the hive since it does little to restrict the activity of the bees. Tack to the inside so the entrance block may be used and the bees may be screened if the beekeeper wants to move his bees. It is possible to poison the mice in the beeyard by using poisoned bait such as used in orchards. Place the bait under boards or in regular bait stations to prevent other animals or birds from eating the bait.

Skunks do most of their damage by scratching on the entrance of the hive at night in order to draw the

bees out. A skunk can eat a hundred or so bees in an evening. Queens may be lost, and the temper of the hive is usually very bad when the bees are being disturbed.

Indications that a skunk is visiting the hive are the scratch marks on the front of the hive and the earth packed down in front of the hive. They cause the most trouble in late summer and fall. The best way to eliminate the skunk is to trap or shoot it. Skunks are credited with being useful creatures in that they eat insects and mice and, if the beekeeper wants to keep the skunks alive, he may build a fence around the yard with wire two feet high. The fence should be buried a little under the ground to prevent the skunk from digging under it. The fence should be far enough from the hives so they may be worked with ease. One individual used an electric fence wire across the entrance of each hive.

Ants are often a problem, especially in the South. In Pennsylvania, they probably annoy the beekeeper more than the bees. Usually, if the hole in the inner cover is left open, ants are less of a problem since the bees seem to take care of them. Many things, such as borax, the leaves of many plants, etc., are reported as

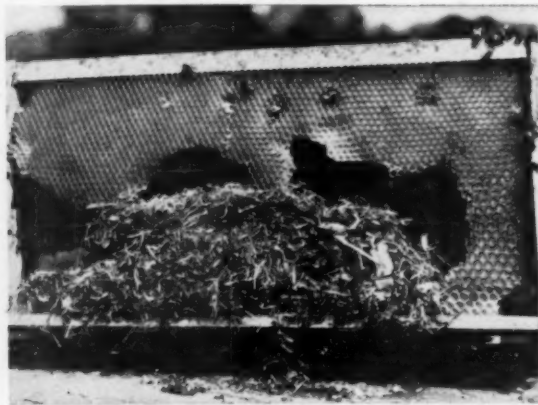


control for ants, but probably the best method is to eliminate the ants outside of the hive with a poison such as 5 per cent chlordane dust. Place the dust around the beeyard or hive stands in such a manner that the bees do not come in contact with the poison. It will help to put poison in the ant nest, if it can be found.

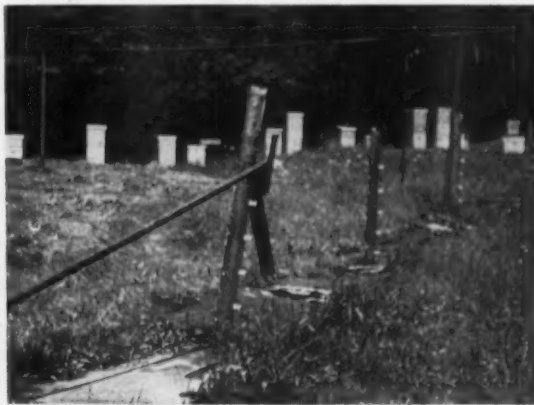
Bears are a big problem in the mountain areas in Pennsylvania and a few other states. They do a great deal of damage in their search for brood and honey. The only effective way to keep them out is to use an electric fence made of five strands of electric wire 8-12 inches apart. Keep the weeds down and lay screen wire or metal around the outside of the fence to be sure the bear has a good ground when it touches the fence.

The Game Commission in many states will help trap and remove

(Please turn the Page)



Mice! What a mess. Sound equipment and good entrance closers help to keep them out.



An electric fence may turn bears (if they don't dig under). Anyway bears can ruin an apiary.

bears. Once bears have tasted honey, they will return to the beeyard until the whole outfit is destroyed. Permission may be obtained, to shoot the bear, from the game wardens in Pennsylvania.

Birds may do a limited amount of damage in a beeyard in that they eat a few bees and queens but, it is doubtful that they do enough damage

to take any action against them especially since they eat so many other kinds of insects. The King bird is credited with doing the most damage.

Dragonflies, praying mantis, certain spiders, blister beetles, wasps and hornets all may do some damage but usually not enough to allow them to be called important enemies of bees.

## Honey and Cancer Series

No. 5 by D. C. Jarvis, M.D.

The soil of the body is represented by the cell. Vermont folk medicine being 300 years old the duration of its existence naturally gives precedence to the cell over the micro-organism. In order to understand the reasons for the therapeutic measures used in Vermont folk medicine and the results obtained one needs to have a good working knowledge of the cell and its behavior when subjected to environmental pressure from factors that may be dominant at the time.

Vermont folk medicine believes that in every individual there is a group of cells that is first to feel the effect of an environmental load that is too great. The location of this group of cells is made known sooner or later to each individual as life is lived. In time they will be the site of an alarm reaction due to failure to make the necessary adjustment to the demand upon them. The location of this group of cells differs in different individuals. Various medical names have been given to these alarm reactions depending upon their location in the body.

In studying human body soil we eventually come to a point where we realize that disease can be traced as far down as the minutest part of the body which is the cell. Here we find that every cell will be in a fit condition to do its job satisfactorily just as long as the environment in which it must live is congenial. This means as long as it is supplied with the proper quantity and quality of food material and oxygen and as long as its waste products are promptly removed.

Every cell in the body must live in a liquid medium. Every cell is surrounded by fluid. This means that fluid is always passing between in-

dividual cells. It means that no two of them are in such close contact as to make this passage or flow impossible. Every cell selects from out of the fluid that surrounds it the food and oxygen it needs to support cell life. And every cell secretes back into the surrounding medium all of the waste produced by its vital activity. The fluid between the cells must be kept constantly flowing. If it should stop the cells might languish and perhaps die, not only from lack of nutrition and oxygen but also because they will be surrounded by their own poisonous waste material. We might say then that disease such as cancer represents begins when cell environment becomes uncongenial and some of the factors constituting the fundamental laws of life are interfered with. A cell may not get the proper quantity or quality of food material and oxygen or the cell may not have its waste materials removed promptly enough.

The symptoms and manifestations of disease are due to a cell's rebellion against an uncongenial environment. This cell rebellion may take the form of acute disease which is attended by an elevation of temperature and an increase in the pulse and breathing rate. A sickness becomes chronic after the cells have become tired and have lost their power of violent reaction

to an uncongenial environment.

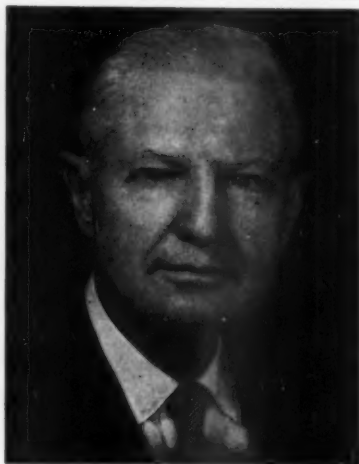
Disease does not come upon us like a thief in the night. Our body must become suitable soil before harmful microorganisms can thrive, multiply and destroy. Sickness is evidence on the part of the body that we have been careless in providing for the welfare of its cells. If there has been created in the body an uncongenial environment in which part or all of the body cells are compelled to exist we are not surprised that a satisfactory adjustment fails to take place and we have an adjustment reaction with which to deal in the form of sickness. Treatment in the form of herb teas, honey, apple cider vinegar, heat, a cathartic to increase bowel elimination and plenty of liquid to flush the kidneys is used to create within the body a more congenial environment for the cell by putting on a human body house cleaning. When a satisfactory environment for body cells has been created the symptoms of sickness disappear and Vermont folk medicine announces that the patient has recovered from his sickness.

The efficiency of the cell as an internal combustion engine depends upon environment for supply of fuel and removal of waste. Such an engine tends to stop when these are disturbed. It falters on too rich or too lean a mixture as power, firing and timing are affected.

The environment in which each individual finds himself is brought into contact with each individual cell of the body by means of the food and liquid taken each day. These two are converted into a fluid which fills the spaces between the body cells. This fluid is the sole medium of exchange between the cells and the outside world which is thus brought piecemeal to the body cells. Thus the world contacts each cell in the body. The outcome of all contacts, reactions, responses and adjustments is, "How are you today?"

The interactions between cell and environment thus carried on represent what may be referred to as biologic phenomena. Under normal conditions of environment these phenomena shape into a physiologic pattern of health but under abnormal conditions of environment they shape into the pathologic pattern of disease. The secret of disease Vermont folk medicine believes lies hidden in the cell and its environmental surroundings.

I feel sure you can see why Vermont folk medicine prizes honey so highly. It believes honey is very neces-





sary for continued good health of all the cells in the human body. The honey bee in its wisdom selects from its environment that which is best for itself. What is best for the honey bee is also best for the cells in the

human body. By means of honey much of that which is best in an individual's environment is brought to the body. Honey therefore is not a luxury. It is a necessity if you wish to be kind to your body cells.

## 8th Annual Metropolitan Miami Flower Show Has World Wide Theme

by Porter V. Taylor

This year the theme of the Metropolitan Miami Flower Show was "The World Grows Around My Door" in honor of the late Dr. David Fairchild. Dr. Fairchild, one-time plant explorer for the U. S. Department of Agriculture, was responsible for introducing the famed Washington cherry trees, and many of the plants which originated in foreign countries that have helped to make Florida famous for sub-tropical horticulture.

In keeping with the theme of the show, garden displays were designed in four categories: Oriental, European, American, and Tropical. Horticultural exhibits were set up in alphabetical order according to the countries from which the plants originated.

This year's show was especially informative because each horticultural exhibit was tagged with a complete description including the country from which it originated; and at each garden exhibit, a descriptive list was posted for each plant used. This gave visitors, who took a liking to any special plant, an opportunity to write down the correct name.

The show was sponsored by 50 garden clubs in the Miami area with assistance from the park departments of Miami, Miami Beach, Coral Gables,

and Dade County.

Naturally seed store merchandise was of considerable interest to the more than 17,000 people who visited the show during the three and one-half day run from April 5-8. Most of the leading local seed stores were represented.

Kilgore Seed Company displayed a complete line of garden supply merchandise, which also included a set of beekeeping equipment. This equipment included a hive with frames, a super, a smoker, a watering jar, a queen trap, and gloves. M. P. Reagle, manager of Kilgore's, said that this portion of their display attracted considerable interest but not as much as displays at other shows which included live bees.

Commercial exhibitors said they were well pleased with the response of those attending the show. Thousands of pieces of literature were handed out, and observers noted that practically none of this literature was dropped on the floor or discarded at the show.

In addition to the 1200 garden club members who worked to prepare the show, about 400 professional horticultural men assisted in setting up the materials. The show covered an

area of 2½ acres in Miami's Dinner Key auditorium. It was estimated that 30,000 plants were used, with about 150 of them being full size trees and palms. Altogether, about 18,000 square feet of sod was used in the show, and about 300 cubic yards of soil.

### Crimson Clover

Early estimates by the Department of Agriculture indicate that the crimson clover seed crop will be two thirds again as large as in 1955 when the total was 7½ million pounds. The indicated average yield per acre is 146 pounds as against only 27 pounds for a year ago, but still below average.

### Bees For White Clover Pollination

According to the "Seedsman's Digest", cage and field tests indicate at State College, Miss., that honeybees are needed for clover seed setting, and that one strong colony per acre might be sufficient but owing to competitive blossoms, more would be advisable.

### Vetch Ups Cotton Yields

We should see more vetch planted in southern areas as a result of a statement by the Miss. Agricultural Extension service that vetch over a course of five years, has increased cotton yields to the equivalent of 50 pounds of commercial fertilizer per acre.

### More Funds For Honey Research

O. E. Hilbert, Director of Utilization Research in the U. S. Department of Agriculture announces that "in the fiscal year 1957 the budget for research on the utilization of honey, to be conducted by Dr. J. R. White Jr., Eastern Utilization Branch, will be increased by \$25,000".



This exhibit of beekeeping supplies was included in the display by the Kilgore Seed Co. at the Metropolitan Miami Flower Show.



Huge revolving globe surrounded by exotic flowers, with Spanish moss overhead, formed the entrance to the two and a half acres of exhibits.



## Let's Talk About The Check Off Plan

Have you thought about the better prices we have been getting for honey the past two years? We can keep it that way!

The Check-Off Plan, of which you will hear more and more, has been worked out to give us funds to help keep honey in its present good demand. As a direct result of the publicity honey has had the past few years plus improving world conditions honey is again selling above the cost of production. This is where it should sell.

Realizing that a healthy honey price aids the whole industry, most of the better packers and dealers have volunteered to collect 1c per 60 lb. can and match it with an equal sum of their own for this purpose. When we sell our crop this summer or fall it is up to us as producers to see that it goes to those buyers who participate in the Check-Off Plan. This will not only show that we are doing our part, but will also insure the payment of an equal amount by the firm who handles the honey. The rate is so low that no one will notice the cost, yet the coverage is so broad that a sum of money will be raised that will be large enough to do a world of good in honey promotion and research.

The machinery is set up. Let's put it to running. Study out the details in your Check-Off Plan Pamphlet. And when you sell get your stamps; not only are they your receipt, but they show that your money is being matched by the dealer. It is the first plan of its kind we have ever had. It is a sound investment in the future of our business.

John W. Holzberlein,  
Vice-Pres., Honey Industry  
Council of America

\* \* \*

The Check Off Plan — What It Is  
and How It Works.

(Leaflet published by the Honey Industry Council and obtainable from Leslie H. Little, Secretary, Shelbyville, Tennessee.)

## USDA Extends Time for Comments On Comb Honey Grades to Feb. 28, 1957

The U. S. Department of Agriculture has announced an extension of time to February 28, 1957, for filing views and comments on a proposed revision of U. S. Standards for Grades of Comb Honey. The proposed revision was announced by the Department on April 19, 1956, when the time for receiving comments was set for December 31, 1956.

The existing grades have been in effects since 1933. Almost a complete revision of the grades is proposed at this time to be in accord with the development of modern packaging and marketing methods by the industry.



**Alberta Apiarist,  
leMaistre Dies**

William G. leMaistre, 53, of 10625 Saskatchewan Drive, Edmonton, who served 17 years at Alberta's provincial apiarist, died Wednesday. (June 13)

Born in England, Mr. leMaistre came to Canada in 1922 and enrolled in the Ontario Agricultural College. After graduating in 1926, he farmed in Saskatchewan and worked briefly in Ottawa before returning to the College staff. In 1939 he moved to Edmonton to take the post of Provincial Apiarist.

Mr. leMaistre took an active part

in beekeepers' organizations both national and provincial. He served as vice-president of the Canadian Beekeepers' Council and as secretary-treasurer of the Alberta Beekeepers' Association.

Mr. leMaistre is survived by two sons, Philip and Richard, and two daughters, Audrey and Joyce, all of Edmonton.

(Alberta Gov. photo)



**J. C. M. L'Arrivee Appointed  
Apiculturist at Brandon**

Mr. J. C. M. L'Arrivee as of April 1st is in charge of the Bee Department at the Brandon Experimental Farm. Mr. L'Arrivee (Larry) age 32, was born in St. Boniface and took his early education in that city. He was in the R.C.A.F. from 1941 to 1946 with service in Canada and England. In 1947 he commenced studies at the University of Manitoba and received his B.S.A. degree in 1951 majoring in Horticulture. He continued post graduate studies at the University of Manitoba and received his M.Sc. degree in 1953 having majored in Plant Science with a minor in statistics. From 1953, Larry was Research Assistant at the Iowa State College studying for his Ph.D. degree, majoring in Apiculture with minors in Genetics & Entomology. He married Catherine Cassidy in 1950 and now has two daughters.

While attending the University of Manitoba, Mr. L'Arrivee managed his own apiary of 10 to 35 hives and during the summers of 1949 and 1950 worked at the Brandon Experimental Farm. He also spent one season with a commercial beekeeper in 1948.

## Anatomy Of The Honeybee

"Anatomy of the Honey Bee" is the title of a 334-page book by R. E. Snodgrass just published by Combstock Publishing Associates, a division of Cornell University Press, Ithaca, New York.

The present text is not a revision of the "Anatomy and Physiology of the Honeybee," published in 1925; it is an almost entirely rewritten account of honey-bee anatomy including the whole series of forms the insect

goes through from germ cells and the egg to larva, pupa and adult.

In his preface, Snodgrass points out that the expansion of our knowledge of insect structure during the present century has made it inevitable that some of the concepts of insect anatomy should have to be re-adjusted to accord with what we now know from wider comparative studies. "So," states Snodgrass, "In the following chapters a number of terms current in apicultural literature will be replaced by others, and it is hoped that friends of the honey bee will not be offended by comparisons of the bee with such an inferior insect as the cockroach."

As a world authority on insect anatomy, Snodgrass has given us in this book a brilliant account of the anatomy of the honey bee and how it relates to the way that bees develop and how and why they function as they do in their interesting communal life. This book should be in the li-

brary of every student of the honey bee and bee behavior—beekeepers as well as scientists.

The book is delightfully written and is enjoyable reading. An example will demonstrate this. Speaking of the "legless" condition of the bee larvae, Snodgrass writes: "If their larvae had functional legs and could freely run about, they would be a great nuisance in the hive, and there would be no keeping them at home. The hive bees, therefore, owe much of their way of living to the fact that their larvae can be stored in cells and kept there until they come out as fully fledged adult bees with instincts for doing only what they should do. The bee society has no problems of juvenile delinquency."

The American Bee Journal highly commends Snodgrass for this marvelous publication and recommends it to its readers. The book is priced at \$6.00 postpaid and is available from our office in Hamilton, Illinois.

## From Australia

Alfred Eastley and  
Murray Charlton

We seldom meet with Australian beekeepers so the whole staff here were delighted with Eastley and Charlton and from strangers they quickly became friends with that kind of immediate friendship that lasts a lifetime. Murray is from Orange and is a senior member of the Commercial Apiarists' Association, located at Sydney. He is a five hundred colony beekeeper. Alfred is from Goulburn and came as a representative of the Federal Council of Australian Apiarists' Associations. He is a 600 colony beekeeper.

And that is fairly large beekeeping down under because of the way they keep bees. Most of the beekeeping is commercial and well organized with a fine marketing arrangement. The honey comes mainly from eucalypts in about twenty kinds and the beekeepers have to know well in advance what the honeyflow prospects are on the commercial ranges. The beekeeping is migratory from range to range, often with five or six moves a year. They streamline operations, moving into one location with all the equipment for living and extracting, bees following truck load after truck load. When the crews are extracting the move starts to the next range. The tinned honey is picked up by the marketing truck and ends in the big coop ware-

house. Imagine this, five or six times a year!

But consider that they can make from 150 to 300 pounds of honey at the present price of 15c. So the going is good and a 600 colony beekeeper can take on a young operator and gradually reduce his work load. It is quite comparable to most good food production operations here. Their winter starts soon while our summer is still on and our winter reverses with their summer. They don't have severe winters and they do have long seasons so queens will wear out more quickly. They will requeen more often and watch stock more closely.

They flew here from Sydney with only two set-downs and with only 27½ hours of flying time. It's a small world!



Alfred Eastley (left) and Murray Charlton in the Dadant breeding yard.



Alf and Murray, with Dr. Cale, in stock testing yard.



# ET'S GET TOGETHER

## Learn and Mix in '56

### Middlesex County Association (Mass.) Aug. 25, Groton

The August meeting of the Middlesex County Association will be on Saturday, August 25th, at 2 p.m., at the home of Mrs. James Delorey, Knop's Pond, Groton.

July was a busy month with special meetings almost every week end. On July 13-15 the Association was well represented at the meeting of the Eastern Apicultural Society at the University of Rhode Island at Kingston. Our member, Alymer Jones, was in charge of the collection of bee gadgets. We were also represented in a panel discussion by Al Baptiste. On July 16th, Wallie Parker held the sixth annual Worcester County field day. Some members were also able to visit the summer home of Mr. and Mrs. Mansfield Austin at Monument Beach on Cape Cod for an extra meeting. Finally our regular meeting was on Saturday, July 28th, at the home of Mr. and Mrs. Charles Helmboldt in Westford.

L. C. Proctor  
Corres. Sec.

### Berks County, Pa., Aug. 4

On August 4th our Association will hold the summer meeting and picnic. Samuel B. Althouse  
Sec. Treas.

### Westchester County, (New York), Shrub Oak, Aug. 19th

The Westchester County Association will hold a joint meeting, with the Bronx County and North Jersey Associations, at the summer home of Mr. and Mrs. Jack Ross, at Shrub Oak, N. Y., Sunday, Aug. 19 from 12 noon on. All members and visitors are requested to bring their own picnic lunch and some chairs if possible. Refreshments will be served by the Association. There is a lake nearby for those who wish to go swimming so bring your bathing suits. In case of rain the meeting will be

in Mr. Ross's large basement. Follow these directions:

Take Taconic Parkway, get out at Shrub Oak exit (Oscawana), turn left, continue with Route 6 thru Shrub Oak—pass Socony Station—drive 2 more blocks, turn left at Mill St. Pass a traffic light, continue till you reach a Blinker, turn right till you reach a fork in road—there is a grocery store—Taibis Grocery—turn left up a hill, continue for 2 blocks, you will see a luncheonette on right and Maple Hotel on left, turn left, go one block, then turn left again or ask where Boxer lives. Our house is on dirt road opposite the Boxers'.

### Midwestern, Kansas City, Aug. 12th, Swope Park

The Midwestern Association will have the annual picnic, Sunday, Aug. 12th, Shelter House 7 Swope Park, Kansas City, Mo., 12 noon until 5. Basket dinner, contests, social time. All beekeepers welcome.

Mrs. William Brite  
Sec.

### Worcester County (Mass.), Princeton

The August meeting of the Worcester County Association will be on the spacious estate of Mrs. Peabody in Princeton. Bring chairs, table, and box supper. Coffee will be served. Let's make this a big get-together.

Adolph Rozenas  
Pub. Chairman

### Beekeepers' Program, University of Mass., Amherst, Aug. 11

The annual beekeepers' program of the University of Massachusetts will be on August 11 at the Bowditch Club House in Amherst. An interesting program is planned. The principal speaker will be Dr. John Eckert, of the University of California. Others will present timely topics which will make the meeting very worth while. All interested beekeepers are urged to attend.

F. R. Shaw  
Un. of Mass.

### Vermont at Bradford, August 25

The annual summer meeting of the Vermont Association will be at Bradford, Saturday, August 25th. Mr. and Mrs. Byron Eastman have arranged for the Bradford Academy building and grounds so we can have a good

meeting regardless of the weather. A business meeting will begin at 10 a.m. and the afternoon will be devoted to talks and discussions. Everyone welcome. Bring your lunch and don't forget the honey for exhibition and prizes.

Clyde N. Wood  
Sec.

### Pennsylvania State, Aug. 13, Ligoniere

Our summer meeting will be of the usual picnic variety on August 13th. The host is the Westmoreland County Association. Free coffee and lemonade will be furnished. The meeting is in Idlewilde Park, one mile west of Ligoniere on Rt. 30. A good speaker will be on hand to give us a worthwhile address.

A. R. Dean  
Sec.

### Eastern Missouri, Aug. 7, Clayton Tuesday, Aug. 7th, will be Past

Presidents' night at the regular meeting of the Eastern Missouri Association. All living presidents since the formation of the Association are expected to attend. Visitors are welcome. The meeting will be on the second floor of the St. Louis County Courthouse, in Clayton, at 7:30 p.m.

Ray Reinhold  
Sec. Treas.

### Northwest Michigan, Copemish, August 5

The Northwest Michigan Association will hold their annual picnic on Sunday, August 5th, in Copemish Park, Copemish, with a noon potluck luncheon and an afternoon program of speakers, music, contests and prizes. A bee smoker contest will be the feature. This is in Michigan's Water Wonderland and anyone is welcome.

Emily Sommerfeldt  
Sec.-Treas.

### North Georgia, Atlanta, August 26

The North Georgia Beekeepers Association will hold their August meeting at the home of Mr. and Mrs. Verne Giron, 5071 Green Pine Dr. N.E., Atlanta, Ga. on August 26th at 4:00 P. M. Mr. W. E. Leverette, Georgia State Bee Inspector, will speak. Members wanting to enter samples of their honey in the annual



contest, are requested to bring it with them to this meeting. Everyone will be enjoying a picnic lunch so don't forget yours. Visitors welcome.  
Mrs. James Rochel  
Secretary

**Norfolk County (Mass.), Needham,  
August 5**

The next meeting of the Norfolk County (Mass.) Beekeepers will be held at the home of Mr. and Mrs. John Proctor, 9 Mercer road, Needham, on Sunday afternoon, August 5 at 2 o'clock.

An interesting program has been planned to include a report on the Eastern Apicultural Society Meeting; opening and inspection of the club hive; and a roundtable discussion of beekeeping problems.

Beekeepers, their relatives and friends are cordially invited to attend and are requested to bring chairs and a picnic basket supper.  
Betty Ann Fisher  
Publicity

Empire State Honey Producers,  
Owasco Lake, Auburn, August 11  
"The annual summer meeting and

picnic of the Empire State Honey Producers' Association will be held Saturday, August 11th, at Emerson Park on Owasco Lake, Auburn, New York.

This beautiful spot has everything—picnic tables, tall shade trees, a beach, an amusement park nearby to keep the children happy, and an enclosed pavilion in case of rain. The lunch room will be open for those not wishing to pack a lunch."  
Mrs. M. L. Carey  
Sec.-Treas.

**SULFATHIAZOLE and the  
ECONOMICS of BEEKEEPING**

The Florida regulation which permitted beekeepers with American Foulbrood an optional feeding of the colonies to cure the disease with sulfathiazole has been rescinded. At a hearing in Orlando, May 15, beekeepers representing the various associations indicated that sulfathiazole was not a satisfactory method of treating this disease, and recommended that the regulation be withdrawn. So the plant commissioner Ed

L. Ayers so recommended.

Florida is one of the first states to use sulfathiazole extensively. Many commercial beekeepers have used sulfathiazole but come to the conclusion that it is not satisfactory or economical. It is necessary for the commercial beekeeper to move his bees several times each year, but if the use of sulfathiazole continued the disease could be spread to areas now free. Isolation of bees in Florida is almost impossible also brood rearing in Florida may go on during ten months of the year and in some places the entire year, which increases the danger of infection and robbing.

The queen and package bee industry is increasing each year so complete protection can be given to northern buyers only, if a burning program is in effect.

This past year the occurrence of American Foulbrood was about nine-tenths of one per cent. Before using sulfathiazole it was about three-tenths of one per cent. The present regulation which now demands that cases of diseases be destroyed is expected to reduce the percentage of disease to a very negligible figure.



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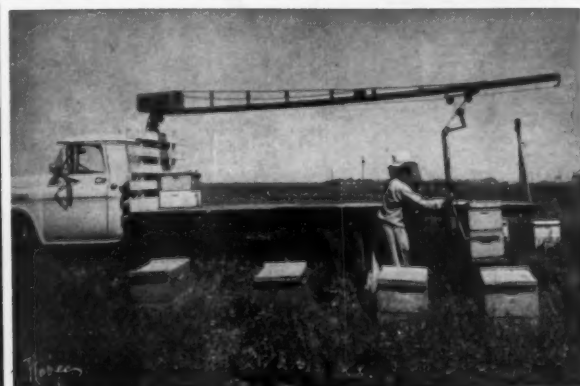
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A. F. Miller, P. O. Box 54, Williams	Calif.
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# Editorial . . .

## Honey House Sanitation

According to "the Old Drone" in the July 1956 issue of "The Minnesota Beekeeper," there was a recent amendment in the Federal Law Books called the Miller Amendment. The prime purpose of this was to protect the consuming public from coming in contact with the newer insecticides which might eventually do some harm. The amendment in effect allows the Food and Drug inspectors to go back to the point of origin of all farm commodities. This incidentally can include honey in which we are all interested. The amendment does not limit the inspection to contamination by insecticides, but all manner of contamination. Besides making it legal to have this inspection done, the law also provides sufficient funds to hire fifty new inspectors on the inspection staff.

So, "the Old Drone" asks Minnesota beekeepers, "Do you think your honey house can stand close scrutiny by a Federal Food Inspector?" The American Bee Journal thought the question important enough to repeat it here.

"The Old Drone" answers for Minnesota—"During 1955 a number of our honey houses were inspected and only one I know of got a complete okay from the Federal Food and Drug Inspector. Let's put our house in order for 1956 inspection." By quoting "the Old Drone," we do not mean to cast any reflections on Minnesota because we are quite sure that conditions in other states are generally not any better.

In fact, we are quite reliably informed that inspectors of the Food and Drug Administration "are out to clean up the honey industry." Relative to this we have this to say. The honey industry needs to clean up; honey should be extracted and processed under sanitary conditions; honey is Nature's finest sweet and the consuming public should have no reason to find it otherwise. But a honey house should not be inspected with the same rigid rules as a creamery.

So, if the Food and Drug Administration "are out to clean up the honey industry," their approach to the mat-

ter should be a reasonable and proper one, and not one concocted for foods in general. Dr. V. G. Milum in his chapter "Honey" in "The Hive and the Honey Bee" states, "If the vegetative or nonsporeforming bacteria which cause human diseases get into honey, the moisture content of bacteria is absorbed by the levulose of the honey, which causes them to dry up and die in a short time. Thus honey is a very poor medium for transmission of human diseases . . . The only known exception to the ability of honey to destroy the spores of introduced bacteria is *Bacillus larvae* which causes American foulbrood of the bee larvae. *Bacillus larvae* does not affect humans and adult bees when honey containing its spores is used as food."

We believe that the Food and Drug Administration, under the advisement of authorities on honey and its handling, should define for the beekeeping industry just what it expects in the way of sanitation of honey houses and honey processing plants. We believe that this should be done before any attempt is made "to clean up the honey industry." And certainly we believe that there should be no publicity permitted which would give honey a bad name anywhere.

To producers of honey, we urge everyone to extract and handle honey only under sanitary and proper conditions. It will be to your advantage as well as to the advantage of beekeepers everywhere to do everything possible to avoid any difficulties of this kind. (See page 313 this issue.)

## Davis (J.J.) Retires

According to a note in the "Bulletin of the Entomological Society of America", the long-time friend and supporter of beekeeping in Indiana and nationally, Professor J. J. Davis, head of the Entomology Department at Purdue, retired July 1. Most Indiana beekeepers who regularly attend meetings know J. J. and have listened to his talks. He has been an active entomologist for over fifty years.



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**FREE QUEENS**—100 samples during month of August only. Our superior strain three-banded Italians. Request sample queen stating state wanted, name and address, also number of colonies you operate. Dixie Honey Co., Belton, S. C.

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1000 shallow frames 5-3/8 x 1-3/8 x 19", 600 standard frames (assembled) 19" top bar, 200 5-gal. cans (new), 4 uncapping knives, 50 lb. medium brood foundation unwired, 25 lbs. thin surplus foundation 4" wide, 1 45-frame Root Simplicity extractor. Other miscellaneous equipment, tanks, strainers, honey tanks and pump. Fred Tully, Aitkin, Minn.

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**WANTED**—Extra white and light amber honey. Let us ship you the containers. Sell us your honey for CASH on delivery. The Hubbard Apiaries, Manufacturers of Bee Supplies and Comb Foundation, Onsted Mich.

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**WANTED**—Honey and beeswax. State what you have and price. Roscoe F. Wixson Dundee, N. Y.

**PAYING CASH** for all grades extracted honey. Tidswell Supply Co., 2711 N. 63rd St., Omaha, Nebraska.

**WRITE FOR SHIPPING TAGE** and current quotations on rendered beeswax. Any amount from one pound up bought. If you have 25 pounds or more, save 25% by letting us work it into foundation for you. Walter T. Kelley Co., Clarkson, Ky.

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**WHITE CLOVER HONEY** in sixties. Ralph Gamber, 910 State, Lancaster, Pa.

**NEW CROP WHITE HONEY**—Clover and vetch, 20c per lb. in sixties. Also chunk comb. Lose Brothers, 206 E. Jefferson, Louisville, Ky.

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**WANTED**—10-frame dovetailed bee equipment and bees. Bird Harbor, Seneca, Ill.

**WANTED**—Several hundred colonies and other beekeeping equipment. Will trade modern suburban home near Houston, Texas. David Rennie, 914 West Main, Norman, Oklahoma.

**WANTED**—Used honey filter. Must be in A-1 condition. R. W. Barnes & Son, Oakland, Nebraska.

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Improved design, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

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Oconomowoc, Wisconsin

**WANTED**—Want to buy several thousand 10-frame deep supers with or without frames. Must be standard size, in good condition. Would also like to buy migratory covers and bottoms. Box c/o American Bee Journal.

**WANTED**—Cash paid for a large outfit of bees in the Midwest, standard 10-frame size preferred. Send all information in first letter. Box B.J., c/o American Bee Journal

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**M. D. 11-frame** hives, shallow supers, frames and foundation, Woodman vertical style uncapper, cut comb drying trays, 15% off list price. Used Novice 4-frame extractor, \$17.50; Root 4-basket, \$25.00. Smith's Bee Supply, 1210 Lewis Ave., Billings, Montana.

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**BRAND MELTERS** and all kinds of bee supplies. Catalogue free. Hodgson Bee Supplies Ltd., 545-13th Ave., New Westminster, B. C.

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**PLAIN or WAVYWIRED** foundation. Beeswax rendered and purchased. Wax Workers, Ithaca, N. Y.

**KNOW** interesting facts about the bees of India through the **INDIAN BEE JOURNAL**, published in English by the Bhupen Apiaries (Himalayas), Ramgarh, Dist. Nainital, U.P., India, and obtainable from them. Subs. Rs9/-, or \$13/-, or \$2.25 yearly.

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**BEES** removed from house or tree to live without touching either house or bees. Bees will then move honey into hive. Save property, honey and bees with my method. Send \$2 for details. Satisfaction guaranteed. George Hawkins, Rt. 1, Lawson, Mo.

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**HELP WANTED**—Commercial honey producer has permanent position open for reliable experienced beekeeper. References required. Write C. S. Engle, Box 178, Wolfe City, Texas.

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**"Why Mess Around With Cappings?"**

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**FOR FAST EFFICIENT SERVICE."**



Our Rendering Plant, with modern equipment and experienced personnel, can actually save you money on your capping rendering. Cappings should be sent in leak-proof containers. If you wish to have the honey salvaged from them, they should not be spun dry or washed with water.

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We are always in the market for your beeswax. Drop us a line; and we will quote you the highest price, either in cash or in exchange for foundation and supplies. **CONTACT US BEFORE YOU SELL.**

Take advantage of the following prices which we offer you for the extracting season:

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Two-stem Steam-heated Knife .....	7.75
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Best of honey getters  
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Having a late fall honeyflow, we produce some of our finest queens and give our best service.

Mated laying queens 1—9, \$1.00 ea.;  
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That stand the test for honey gatherers, gentle, prolific. Queens bred from hives making 300 lbs. and over of honey. Fumidil-B fed grafting and queen yards. HEALTH CERTIFICATE with each shipment. QUEENS 1 to 1000.  
1—19, 75c; 20—100, 65c; 101 up 55c.  
All Queens delivered Airmail. Prompt Live Delivery Guaranteed.

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ITALIAN QUEENS.....65c

Tested Queens.....\$1.10  
Delivered Air Mail

GASPARD BEE CO. Hessmer, La.

# Crops and Market

by M. G. Dadant

The honey crops the country round vary considerably for this time of year. Of course it is only mid-season, but judging from present reports the total crop may not be equal to 1955; certainly no larger.

*Equal or Better Than 1955*—In Maine the crop is at least 25% better according to our reporters. The possibilities for the rest of the season are good. In New Jersey a crop is expected equal to last year and in Maryland considerably better, one reporter says 100% more. In New York the crop is way ahead by 50 - 75% over 1955 with excellent prospects. The same is true in Pennsylvania.

Mississippi has a 40% better crop with good going ahead. Louisiana a crop about equal to last year with fairly good prospects although moisture is needed. In Arkansas the crop is better than last year with good conditions promised for the rest of the season. Nevada is about the same as last year with good prospects ahead in spite of poor weather. In the mid-west, Indiana reports a crop in the northern part of the state that is just about the same or better. Missouri equal to last year. Some say 40% better with good prospects ahead. In Ohio the season was late although the crop is reported as good with some ups and downs and good prospects ahead. New Mexico equal to 1955 although it has been quite dry. Utah equal to last year. On the coast, Washington claims a crop also as good as 1955 and Oregon considerably above. California reports vary all the way from 30% more to 25% less.

*Crops Reported Less Than 1955*—Vermont crop will be about half as good as last year although the prospects for the rest of the season are good. New Hampshire about two thirds of last year. West Virginia and Virginia less than '55 with only fair prospects. Florida 75% of the previous season and conditions ahead

not too good. Tennessee somewhat less than the past season with fairly good conditions ahead. Texas crop is about 60% of last year and conditions only fair. Some say only 50% depending on location. Southern Indiana reports smaller crops than in 1955 because of too much rain although fall prospects are good. Michigan crop less than last year and they need good warm weather. Some report a failure. Illinois is probably not equal to '55. In some areas it is way below. Too wet during the flow; in fact bees were sitting in the hives during the best flow period. Future prospects only fair. There are places where beekeepers have secured a good crop, some even better than last year. It is spotty. In Iowa crop reports show all the way from 40% of as much honey as last year to as little as 10% with prospects not too good. Some beekeepers have a fairly good crop. Kansas is less than last year with few reporting a crop anywhere near equal. Nebraska about 50-75% of 1955 although recent rains have improved conditions. Wisconsin apparently poor in most of the state. Some report getting little above winter storage and some only a fair amount of honey for extracting. In Colorado great variation is reported with no crop to date for some reporters and a slow flow and very few reporting crop equal to last year. Wyoming prospects are only fair.

### Prices

Rather early yet to assume what the price may be. It now varies all the way from 13c to 16c for the white honey with a medium of 14c or better. Most prices f.o.b. honey house; some with exchange of cans. Amber honey varies from 10c to 12c. Stable prices for the two grades will be established by the future crop available.

The Canadian crop shows the same variations, with British Columbia reporting a better crop than last year. In Saskatchewan prospects poor. Ontario as good as '55, to about 50% as good. Quebec, less (rainy). Manitoba, good but wet.

**Honey Wanted**—Cars and less than car. Top Prices.  
C. W. Aeppler Co., Oconomowoc, Wis.



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**Continental Honey Cans**

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 Beekeepers Club

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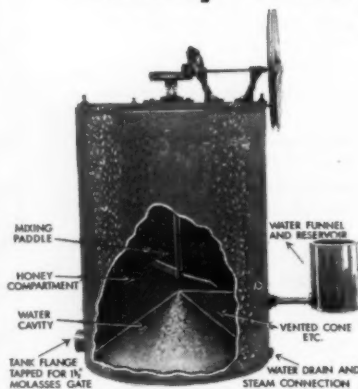
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**KELLEY'S DOUBLE BOILERS** are made in 40 and 100 gallon sizes, with or without the mixing paddle attachment (which can be installed on older tanks or

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**Queens . . . 65c**

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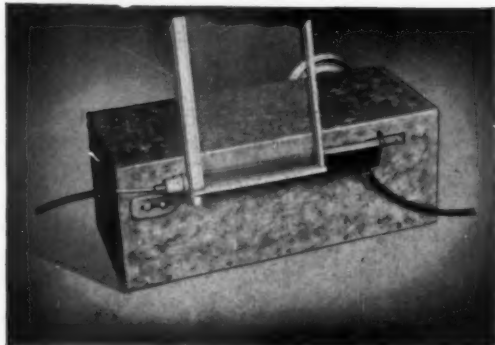
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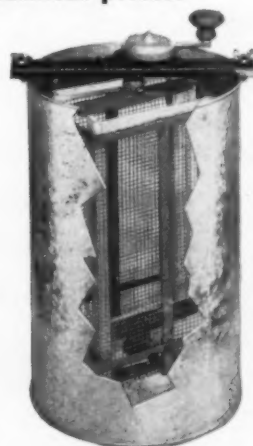


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The famous Root uncapping machine shown here will uncap three to five combs per minute. The steam heated blade vibrates back and forth at the rate of 700 to 900 strokes per minute and makes a clean cut rapidly. Root dealers also feature steam, electric, and plain hand operated uncapping knives at economical prices.

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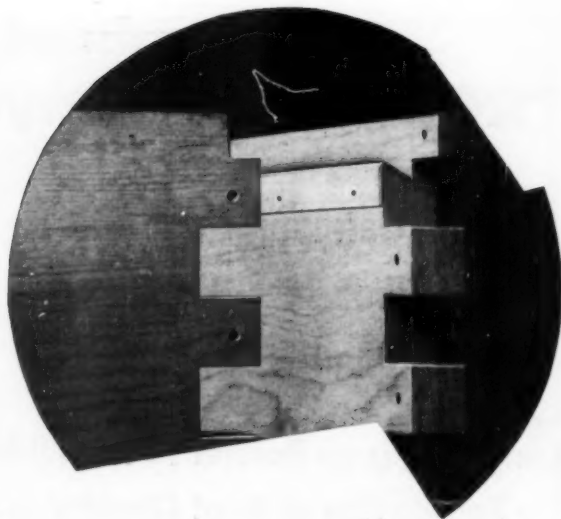
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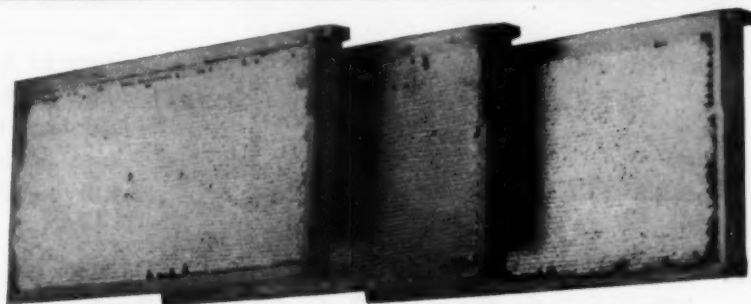
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Service and Give  
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